

FTS-USACE

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Coordinator Good afternoon and thank you for standing by. At this time all participants are in a listen-only mode. After today's presentation we will conduct a question and answer session. Today's conference is being recorded. If you have any objections you may disconnect at this time. I'd now like to turn the meeting over to today's host, Mr. Dana Crookshank. Sir, you may begin your call.

D. Crookshank Thank you. This is Dana Crookshank, U.S. Army Corps of Engineers Public Affairs in Washington. I'd like to apologize for the delay. As you understand, we're very busy right here and had a little trouble getting everybody in the room at the right time. With us here today in Washington we have Mr. Don Basham, who's Chief of Engineering here at HQ USACE. We also have Mr. Joe Hartman and Joe's title is, I'm sorry, we don't have Mr. Hartman. I'm sorry, we have Mr. Gary Lowe and, Gary, your title is?

G. Lowe I am the Chief of the Programs Integration Division here. I'm responsible for budget and program development.

D. Crookshank Okay, also on the call we have, from our Mississippi Valley Division, Mr. John Rickey, who is our Public Affairs Officer. John, who do you have with you?

J. Rickey Dana, we've got Al Naomi from New Orleans District, Walter Baumy and Greg Breerwood. I also have with me John Hall, the PA down there. So, we're standing by. We'd like to ask as we start, understand everybody we're having severe communications problems down here, so if you talk over one of us it's going to cause us not to be able to hear you and get back up. So, please bear with us on our communications limitations.

D. Crookshank Okay, thank you. I guess we will start here in Washington. Do you have any updates to give?

D. Basham No, let me just start out by saying I want to maximize your amount of time to ask questions, but what I would like to start out with is asking the field folks down range to give us a brief update on the current status of where we are with

dealing with the breaches and the status of where we are with the dewatering exercise and where we are with all of that. So, if we could start with that and then I think that's the most pressing thing at least from our point and perspective up here dealing with trying to help the folks in the New Orleans area right now. Then we'll open it up for question and answers and go from there.

W. Bauny

This is Walter Bauny, Chief of Engineering, New Orleans District. I'll give you a brief overview. The lake has receded to within a foot of normal levels at this time. We're still working to get the water out of the city. We're underway in closing the 17th Street Canal at Hammond Highway, that closure is 75% complete at this time. A closure at the London Avenue Canal, and this is at the mouth of the canal by the lake, we continue to push rock into that canal and close it.

Now, on the 17th Street Canal, we're working our way back and we're at the breach in the original hurricane protection levee and we're putting rock in that hole at this point in time. So, we have reached that site. We're also making provisions to bring in portable pumps so that we can pump water from that canal into the lake.

The next item we'll do in that area is get the London Avenue Canal breaches closed so we can operate the pump station at the head of the London Avenue Canal. By operating that pump station and the temporary pumps at 17th, we should be able to get the pump station on 17th Canal working when the breach is closed. When I say breach I'm talking, again, a breach parallel to the canal. We have a pump station that's operating currently at the IHNC Canal. We're pumping out about 5,000 CFS at this point in time.

Moving to the New Orleans East area and the St. Bernard Parish areas, we're in the process of mobilizing contractors to breach the levees and get water out of those areas. We have some information on the pump stations at this point in time in both of those areas. We know one pump is working in New Orleans East and St. Bernard, we're not sure. We're still trying to get reconnaissance out there so we could evaluate the extent of damage and what it's going to take to get those stations back in order.

... Parish, same thing; communications have been stymied throughout this entire episode. We've got people trying to get into the parish and also making contact with knowledgeable technical people in the parish so that we can assess their pump station capacity. But we're trying to, we're actually, we have a

contractor mobilized to go down to that site and breach the levees on all three areas on both the east and west bank of the river. We're also doing a breach, well we've got several breaches in mind, but that covers the general areas.

That's the update.

M All right, let's go ahead and open it up to questions then.

M We're ready for questions, Eddie.

Coordinator Thank you. At this time we'd like to entertain questions. The first question comes from Andrew Martin.

A. Martin Hello. My question is was there a plan in place to deal with a breach in the levees? If so, what was it? If not, why wasn't there a plan?

W. Baummy Yes, there was a plan in place. The problem with any plan with a catastrophe of this nature is you don't know what it's going to do to the entire area. All the contractors, their equipment, the communication lines, everything that you would need to get out and fix any problems was in chaos at that point in time. So, it's taken some time to get the communications going. We're still trying to get

surveillance in particular areas and that's really held us up as far as how fast we can proceed. But movement of material and equipment has been the biggest problem we have. The storm was devastating by all accounts. Bridges were knocked out of service, navigation structures and all those that are needed to move the types of material and equipment that's required to fix these sorts of situations.

A. Martin Wasn't that factored into some of your scenarios, though? I mean I'd imagine if you had a plan in place for a category five or four storm some of this chaos would have been part of what was anticipated.

W. Baumpy I think it's just the extent of the storm damage that we experienced. I don't think you could have any plan in place that you could execute to handle something of this magnitude.

D. Crookshank If I could just interrupt for one second. We have your name from the moderator, but if we can also get the name of your organization.

A. Martin *Chicago Tribune.*

D. Crookshank Thank you.

Coordinator Our next question comes from Andrew Revkin from the *New York Times*.

A. Revkin Thanks. Thanks for holding the briefing, too. In the spot, the main breach, the one that was so problematic, that still is, did you, I understood there were annual inspections, but was there any preceding information that had ever come from the homeowners or anything along that part of the wall that indicated any kind of problem, any kind of seepage, moisture, and/or were there any history of any collision there with any work barge or any of that kind of thing? I have a quick follow-up.

W. Baummy We've had no complaints about this wall. This canal is not open to navigation. There's nothing that could have collided with that wall. All the information we had based on the inspections that we have done on an annual basis and from a local sponsor was that the wall was in excellent condition prior to the storm.

A. Revkin Okay, the follow-up is about the general integrity of the walls. Is there any surprise to you that three failures were in the canals and not on any of the exterior lakefront levees? The canals obviously have lower overall heights, but

was there any modelings that had been done that might imply that if a wall was overtopped it would erode and fall down?

W. Baummy The walls are designed for the same level of protection as the lakefront levees. The reason is that they're not quite as high is because you don't have the wave action in those interior canals as you do on the lakefront, but they're all designed for the same level of protection. So, there was really no difference in the walls of the levees, it just so happens that this particular failure occurred at this location because of the mechanics of the storm. It's not a surprise or no surprise, it's just the fact of what happened.

A. Revkin The other thing was that Mr. Breerwood was quoted by one of my colleagues today saying, "we never did think they would actually be breached," meaning the flood walls, which seems to be at variance with what we had heard, which was that a category three storm was all this was designed for, so a category five was almost inevitably going to be a big deal.

W. Baummy Well, I don't think you ever anticipate anything is going to be breached. It's possible you would have some overtopping, but, you know, the question of breaching or not is pretty much academic. The answer to that is that if you have a category, something greater than what you designed for, you're going to have

problems of some type, some of them catastrophic. Whether it's breached or overtopped, that means that you're getting water into the city and ultimately you're going to have some serious problems because of it and that's obvious looking at what's happened.

Coordinator Our next question comes from Brian Brawdy from CBS Chicago.

B. Brawdy Yes, gentlemen, thank you again as the other callers said as well. We know you're very busy. A quick question, it's two-part, I'll ask them both in the beginning. President Bush just concluded a press conference saying that the federal government will be supplying housing. My question is knowing that the catastrophic housing unit from FEMA is already on site, first part of the question, is there an official request that they would put in to the Corps of Engineers to get a forward engineer support team into an area to decide if this would be a good place for the housing? If there is that form, has it been submitted to you all already?

G. Breerwood This is Greg Breerwood, the federal response plan is a plan that is normally put in place after any disaster of this magnitude. FEMA does come out with a mission assignments to various agencies, one of them that normally comes to us would be a housing plan. At the present time I am not familiar or not

knowledgeable of that task as of yet. We're operating right now trying to take control of the breach and evacuate the city for now.

B. Brawdy Great, could I just get the spelling of your last name one more time please?

G. Breerwood B-r-e-e-r-w-o-o-d.

B. Brawdy Thank you very much.

A. Jachimowicz This is Adam Jachimowicz, Corps Headquarters Emergency Management. Just very recently we did receive a tasking from FEMA under our ESS3 mission to provide 50 engineers to 50 housing strike teams that FEMA is setting up. We just received that and we're in the process of filling those taskers to get people on the ground and support FEMA.

B. Brawdy I'm sorry, if I could you to spell your last name as well.

A. Jachimowicz J-a-c-h-i-m-o-w-i-c-z.

B. Brawdy And you're from the Corps, yes?

A. Jachimowicz Correct.

B. Brawdy Thank you very much.

Coordinator Our next question comes from Ann Carnes from *Wall Street Journal*.

A. Carns Hello. Thanks for taking the time for the call today. Could Mr. Baumpy explain the strategy of doing the additional breaches and what's that's going to accomplish and how that fits into the overall plan? I'm not sure I understand that.

W. Baumpy The greater New Orleans area is a bowl. The river is higher than the homes on a daily basis and the lake is higher than most of the land within the city limits. So, the levees surround the area to keep water out of the residential areas. That's a normal condition. Now we have a flood condition where the water inside the bowl is higher than the lake level, so now we want to drain the water by gravity as much as possible out of the bowl into the lake. Once we do that we'll close that breach and then we'll start the pumping operations to get the remainder of the water out of the system.

A. Carrns Okay, thank you.

Coordinator Our next question comes from Charlie Wolfson from CBS News.

C. Wolfson Yes, sir. I'd like to just ask a general question if I could of when the residents of New Orleans who are in the worst affected area, the worst affected by water, will see an appreciable decrease in that level of water. Are we talking hours or are we talking days still?

W. Baumpy We're definitely talking days.

C. Wolfson Can you say how many days?

W. Baumpy No, but let me clarify what I mean when I say days. Once we open the breaches, they'll see an immediate improvement in many areas at that point in time, but it will be days before we get the water out of the city.

C. Wolfson Thank you.

D. Basham This is Don Basham in headquarters. For those of you all that may not be familiar and, Walt, you all help me with this, is one of the things you need to remember here or have an understanding of the lay of the land, there's about 13 parishes, I believe, in New Orleans. Parishes, for many of us, where we grew up, are nothing more than townships and counties. Each one of those kind of has their own levee protection system. So, you really have a series of bowls. So, each one of those contains its own water to some extent and also has pumping capacity in many cases. I don't think all of them have pumping capacity, but most of them do. So, when you look at draining, when you look at breaching and pumping, it's not all in just one open area it's a series of ponded areas that we have to work collectively. Walter, did I say that about right?

W. Baummy Yes.

Coordinator Our next question comes from Jeff Cronin from Construction Equipment Guy.

J. Cronin Hello. Thanks for taking the time out. By the end of last week you knew that the city was likely going to get hit with a category five storm. Now, knowing

that the levee system was only able to protect up to a category three, what if it were prior to the storm hitting landfall to reinforce the levee system?

A. Naomi This is Al Naomi. We have over 350 miles of levees built to certain standards. There's not much you can do in a matter of 24 to 48 hours that's going to make that situation any better. Certainly there are provisions taking that certain spot where you, say, have ongoing construction projects that you certainly harden those sites, but there's not a whole lot you can do to change a category three into a category five protection system within 48 hours.

J. Cronin Thank you.

W. Baummy I'll just add one thing to that. When we thought the storm was coming, even prior to knowing the storm was coming to New Orleans, we were already planning for the event. We had no idea it would be this serious of an event because the storm wasn't that strong the week before. So, we were meeting, we were preparing people to deploy. We were contacting folks about responding to the event no matter what it was. So, there were quite a few advanced preparations going on. In addition to local entities, they were ... their

systems wherever they thought they had weaknesses. So, there was an awful lot of activity happening prior to the storm hitting.

J. Rickey Dana, this is John Rickey. We're having a little bit of a hard time hearing Mr. Basham. I think the guys down here missed this; it's actually not 13 parishes, it's 13 sub basins in the city. I just want to make sure that's factually correct, Don. I don't think Walt could hear what you said.

D. Crookshank Okay, thank you.

Coordinator Our next question comes from Ryan Corsaro from CBS News.

R. Corsaro Hello, good afternoon, gentleman. I just want to get an update on the whole sandbagging issue. How many sandbags have been dropped so far? How many are expected to need to be dropped in order to plug these up? Are you still just filling 20,000 pound bags with 14,000 pounds because of the helicopter situation?

G. Breerwood We've placed 120 bags of the 3,000 pound bags already. All through the night we filled larger bags, the 20,000 pound bags actually filled them up with a

little less than that to make sure that we could get them off the ground. We have been dropping them since this morning. I don't have a count right now, but we will continue to do that along with ... rock north side of the breach until the breach is closed.

R. Corsaro Okay, and are you adding sheet pile?

G. Breerwood The sheet pile is being placed at the entrance of the canal at Lake Pontchartrain to actually close off the lake to prevent any further influx of water from the lake.

R. Corsaro Thank you, gentlemen.

Coordinator Our next question comes from Judith Powers, International Dredging.

J. Powers Hello. Thank you all for being there. I have questions about the mechanics of what you're doing when you're breaching the dykes. Who is the contractor you have for that and what's the technique they're going to be using? Are these all earthen or the steel and concrete dykes?

M Hang on just a minute. They had a hard time hearing you, so I'm going to give this to Walter. She wanted to know what the mechanics are of it and who the contractor is involved in the working of the breaches of the levees.

J. Powers And are the levees the earthen levees or the concrete and steel dykes?

W. Baummy ... variety of materials in the levees at this time. The contractors and local interest, volunteers, there's too many to mention at this point in time. They're working together, many times on the same job. Even the state agencies are doing much of the work on their own. So, it's moving pretty good from that standpoint, that they're pushing the material into London Avenue and the material is coming back to close the breaches, right now we're using a variety of materials. Basically, what we're doing is we're adapting the engineering to what we can find. If we can get material to the site, we're trying to find a way to make that material work.

J. Powers Thank you. So, in regard to the dykes you're going to be breaching purposely in East New Orleans and St. Bernard Parish, are those earthen dykes and what kind of equipment are they going to be using to make those holes in the dykes?

W. Baumpy For the most part they are earthen dykes. The equipment, I don't have an up to date there, but we're using marsh equipment. We're using crane and bucket operations on floating plants and anything else we can get. We were trying to airlift some equipment onto a levee this morning and I don't have an updated as if that was successful or not.

J. Powers Thank you very much.

Coordinator Our next question comes from Andrew Martin from *Chicago Tribune*.

A. Martin Hello. Last year there was a simulated hurricane, hurricane Pam. I wondered if that included widespread flooding in the city and whatnot. As I understand you participated in. I wondered how that played out differently or else what similarities there were to how Katrina played out from the ... perspective.

A. Naomi We did have that hurricane exercise with Hurricane Pam. The emergency managers and certain personnel were involved in that. I've heard about it and there was great participation in it by local, state and federal agencies. I was not personally part of that, so the people who participated in that are not in this room at this point.

J. Rickey Andrew, we're going to owe you a due out on that. We promise to get back to USACE to get an answer to your question right after this call.

A. Martin Okay. Thank you.

Coordinator Our next question comes from Gary Fields from the *Wall Street Journal*.

G. Fields When was the 17th Street Canal project actually completed on? That's the first part of the question. The second, when it was constructed it used an I-wall design instead of a T-wall design. What would that have done in terms of making or lessening the susceptibility of the particular canal wall to the breach? What went into the decision to go with I-wall versus T-wall?

A. Naomi The decision to go with I-wall versus T-wall ... function. You go with the T-wall when you need a much higher wall than an I-wall will support. You go with an I-wall when you can't squeeze a levee in. In this particular case the area around this canal is extremely densely populated and there wasn't any room to put a levee in. Certainly we prefer levees to I-walls or T-walls because they're somewhat less expensive and they're easier to construct. So, the decision was,

in this case, an I-wall because the height that we required facilitated the construction of an I-wall. A T-wall would have required more technical work, more pile driving beneath the wall that would have been far more expensive, but not necessarily giving you any additional level of protection. So, the I-wall was the optimum form of construction that we used in that area for this level of protection.

D. Crookshank Walter, was that you speaking?

A. Naomi Al Naomi.

D. Crookshank Al Naomi. Thank you.

Coordinator Our next question comes from Tom Ignowski from *Engineering News*.

T. Ichniowski Thanks. I'd like to follow up on that question that was just asked. Has the 17th Street Canal been closed off? I'm unclear whether that actually has happened and if it has, when did that happen and how long a stretch needed to be closed off?

G. Breerwood We're in the process of closing it off now. Like I said before, it's about 75% complete. We hope to make closure by nightfall, of course depending on the conditions. The area there and the width of the canal is I think close to about 200.

T. Ichniowski Say again.

M About 200.

Coordinator Our next question comes from Guy Gugliotta from *Washington Post*.

G. Gugliotta Yes, hello.

M Guy, we cannot hear you down here.

G. Gugliotta Hello.

M Now we've got you.

G. Gugliotta Sorry. For Walter Baummy or Al Naomi, are there, in fact, three breaches here?

I know of the 17th Street Canal and the London Avenue breach. Is there a third breach? I have a follow-up.

W. Baummy In which canal?

G. Gugliotta In the levee. In other words, I understand there's the long breach in the 17th Street Canal and a much shorter breach in the London Avenue canal, but I have read and heard of various references to a third breach. Is there such a third breach?

W. Baummy Yes, there is a third breach over at the IHNC on the east side in the harbor navigation canal there's another breach.

G. Gugliotta How big is it?

W. Baummy I don't have that in front of me, but I'm going to guess about 400 feet from what I recall.

G. Gugliotta Is there an effort to close that down?

W. Baummy Not at this point. Water is draining out of the system, so it's actually functioning as one of the induce breaches for that local area. There's also a couple of breaches in the St. Bernard area on the local levee and there's also breaches along the federal levee on the outer perimeter at this point in time.

G. Gugliotta And are all of those draining at this point?

W. Baummy Yes, I believe so. There's one particular breach I'm not sure of which way it's draining. I've had conflicted information and we're trying to get somebody out there to take a look at it or get in touch with someone who's seen it.

G. Gugliotta Thank you.

Coordinator Our next question comes from Carol Rosenberg from the *Miami Herald*.

C. Rosenberg Thanks for the briefing. A couple of quick questions; do you have yet a volume of water in the city? Do each one of these 13 sub basins have what you described as ponds? How many egress breaches are you going to make?

Thank you.

W. Bauny Okay, I didn't catch the last part of that question. We're working on volumes in all areas at this point in time. We have some preliminary volumes for the two areas in New Orleans, but we're lacking some factual data for water height within the system. We're trying to get a surveyor out there to determine what that elevation is and then we could work up a volume. The other two areas, we're computing those at this time. What was the last part of your question?

C. Rosenberg I had two other parts of it. One was do all 13 sub basins have these ponds that need to be pumped? Then how many egress breaches are you going to make?

W. Bauny I thought I described that earlier about how many. One of the things you need to consider here is the lake is changing and the interior basin levels are changing constantly. So, when we get on the site actually with the equipment we will make a determination of how many breaches we're really going to implement. We have to proceed as if we're going to implement everything we can do at this point in time to get the water out of the system.

M Not all 13 sub basins have water in them.

- Coordinator Our next question comes from Anne Carrns from the *Wall Street Journal*.
- A. Carrns Hello. Thanks again. Could you summarize one more time the different components and the estimated time frame for each of them? There seems to be a lot going on simultaneously possibly, but could you give just a more specific timeline of when you expect to do these additional breaches and how long it's going to take to drain those sub basins until you can start pumping? Can you sort of break it down by each component, how long it's going to take?
- W. Bauny We're mobilizing contractors at this point. We can't predict exactly when they're going to be out there. I don't know if someone's going down river at this point. We were hoping so, and I tend to believe that, but I haven't verified that. Again, on this, we were trying to airlift some equipment to one particular spot.
- A. Carrns Okay, but once you get the subcontractors down there and do the breaches, earlier you said days, but I mean after, what exactly has to happen before the water is substantially out of the city? Can you sort of just give a rough estimate of how long each component could take?

W. Baummy I'm sorry, but I lost the last part of your question. Could you repeat it please?

A. Carrns Sure. I mean after the subcontractors are there and these additional breaches begin, how long would you expect it to take before that water starts flowing out of those individual pockets? What's the overall timeframe at this point for substantial reduction of the water in the city?

W. Baummy Water should start flowing out immediately when the breaches are made. The way it's going to work, you breach it; you get the water out as best you can with gravity drainage. You supplement that gravity drainage with pump capacity wherever you can get it back on board or wherever it's currently existing. So, depending on how many pumps are working at the time or we get online as the water is draining by gravity will determine that time period.

A. Carrns So, essentially you can't estimate it at this point how long it would take once the pumps are operational?

W. Baummy I'm not going to do that right now.

D. Basham

Let me try to put that a little bit in perspective. You've got to make the breach. We've got to figure out how wide that breach is and as somebody mentioned and asked a while about surface elevations, we've still got to get out in some areas and determine what the water surface elevation is so we can figure out the quantity of water that has to be moved in these various sub basins. Coincidental with that they've been checking with the pump plants ... figure out which ones are operational. Even if they are operational there could be some question about whether it would be operational at maximum capacity. So, that will have an effect on the volume and the quantity of water that's moved at any one time.

So, if it appears that we're being a little bit hedgy on giving you dates and times right now I would tell you yes we are because there's just too many unknowns right now and we just don't want to create an expectation out there that in fact we cannot meet. But I will assure you that we've got teams developing some models right now off of some topographic information we've put together in the last couple of days so we can get a better handle on the volume of water that we've got to move, the folks downstream are working frantically to figure out the quantity and the condition of the pump plants so we can figure out the capacities we can move. When we get a handle on those, and I would hope that we would have a basic handle on that within the next 24 hours or so, we

will be able to give you better estimations of the timing and quantities that we can remove the water from the community down there.

A. Carrns Thank you.

Coordinator Our next question comes from John Riley from *Newsday*.

J. Riley Yes, I'm confused about the question of whether the breaching was expected or not expected when overtopping occurred. Did you expect these walls to hold even when they were overtopped and the design failed or did you anticipate that there would be breaches when overtopping occurred?

A. Naomi I didn't expect, I don't anticipate those kinds of problems. All I know is what the system can do and what it's capable of doing. You never know what's going to happen when a system as complicated as this is put under this kind of stress. Anything is possible. We don't really know. We've experienced this type of storm against this system. So, to say that I expected or didn't expect it really wasn't on the horizon. We have a cat three design, every year have a cat four, cat five storm come through, all bets are off. So, you can't say that you expect or not expect anything to happen. All you know is you're going to have

a problem. It's very hard to define in advance what those problems are going to be.

J. Riley Can I ask a follow-up?

D. Basham If you could let me expand on that just a second and then, yes, you can follow up. I think clearly when the storm started coming in and we came to the realization that this storm was going to exceed, not only exceed a category three, at one point in time we thought it could very well be a category five. Once we knew that it was going to exceed the design capacity of that levee system down there, that's why there was so much energy and effort put in by the community to start trying to evacuate the community to get people out of harms way. So, yes we had a lot of concerns about the integrity of the system, not because we thought it wasn't designed, or concerned about the design for its intent, but clearly we were exceeding the life or the capacity of the design of that facility and we could very well anticipate the worst was going to happen because we knew we were far exceeding the design capacity of that.

J. Riley My follow-up is I understand that a category four or five exceeds the design capacity of a category three system in the sense of overflowing it. What I don't

understand is whether you expected these walls to hold even when they were overflowed or whether you did not expect them to hold when they were overflowed.

W. Baummy Let me address this from a different viewpoint. The storm surge that came in with this storm was greatly exceeded the design capacity of the design elevations of the system. When that happens you get destruction coming from every angle you can imagine. You've got debris, you've got loose vessels, you've got all kinds of things coming at you that you would not anticipate or not design for that, for the design storm. So, we feel like we probably had some impact by maybe barges and other vessels through some of the system and we will do an analysis and we will evaluate where we're at. But at this point in time we're responding to the disaster is what we're really concentrating on.

J. Riley Thank you.

Coordinator Our next question comes from Lorraine Woellert from *Business Week Magazine*.

L. Woellert Hello. Thank you for having the call. I know that there have been chronic funding problems with the corps and particularly with this system, but in addition to that have there been any regulatory or policy hurdles that have been thrown in your way in recent years or recent decades in addition to the funding problem, any requests that you've made with the federal or state governments to change policy that might have helped you?

G. Lowe This is Gary Lowe from headquarters. I think the short answer to your question is no not to our knowledge. The funding that we have received through the normal process of the president submitting his budget and the congress appropriating the funds has been consistent over the years. Reasonable amounts of money have been put into this project, I think consistent with what happens to most federal agencies when overall funds are limited. As the district has described, we're responsible for part of the system and then there's also state and local responsibilities. They could answer the question better than I, but they've been cooperative, they maintain their sections and there are no regulatory hurdles that I'm aware of that have impacted the design or the construction of the system.

M I think you answered that, Mr. Lowe, adequately. We don't have any further response.

L. Woellert So, no environmental or other type of regulatory issues that you might have sought relief from, anything like that.

A. Naomi We had no environmental issues, no regulatory issues. We were building and constructing this according to our plans and there was nothing stopping us.

L. Woellert Thank you.

Coordinator Our next question is from Andrew Revkin from *New York Times*.

A. Revkin Thanks a lot. I don't want to belabor the point, but I have to follow-up on the wall questions because if that wall hadn't come tumbling down we wouldn't be having any of these conversations. Does the Corps, when it determines standards for what it considers adequate, even for cat three, did they require the companies offering alternatives whether T or I or other to do modeling of what would happen if it was overtopped? Did you have, basically, a system that only could be tested by its own failure? There hadn't been any efforts to do failure

testing, which like for a space shuttle wing or an airplane part, anything that's a vital component, and obviously this is a vital component, has to be taken over the limit before you put it in place. Did you do any of that kind of testing or require it?

A. Naomi We have a responsibility to design this project based on the authorization, which is category three, basically. The project is designed that when we go through all the testing required to get to that level of protection, to go and test something based on some over design or problem beyond our design would not be fruitful because it wouldn't serve any purpose.

A. Revkin But how do you get the standard for it in the first place? How do you know what its limits are, whether it's cat two, three, or four or five?

A. Naomi The standards and the reason we went to this level design, we had back in the early '60s, we were given a project storm by the National Weather Service. That project storm called a standard project hurricane serves as the basis of this design and serves as the basis for the authorization of this project. So, that design is what we used and was given to us by the National Weather Service. That is what the elevations are all based on. That's what the design of the

levees are based on. That's what this project is based on and that's what we were required to use.

A. Revkin Maybe I misstated. I'm talking specifically about the wall as a component of the overall design.

A. Naomi The wall, the levees, everything is based on that design. They're all at the same level of protection. There's nothing special about these walls any more than there's anything special about a levee. It's basically the same level of protection.

D. Basham To expand on that a little bit, we have models and modeling that we do tests on our design of our walls. We build the safety factors into that. I don't remember what this particular system had, but we also have, we build in free board zones, which is kind of a free zone that we would anticipate that you could have some additional wave action or other actions that would occur above the normal water level. So, we try to build in a number of different factors of safety above what we think the normal loading conditions of that are going to be.

But when you actually get involved with an overtopping, quite frankly you don't design these walls with an overtopping in mind because that's what you're

hoping to, you design it to a particular category of storm, if you were going to design for something higher of that you'd have a higher wall design. So, in this particular case if you were anticipating that you were going to have an overtopping you probably would have had some armor or some type of material behind it to account for the erosion we think occurred on the back side of the wall.

A. Revkin That's valuable. Thank you.

Coordinator Our next question comes from Tasha Eichenseher from Greenwire.

T. Eichenseher Thank you all for your time. It's my understanding that the Corps has started a study on whether to upgrade the levee system so that it could handle a class five storm. I was wondering if I could get more details on the status of that report before Katrina and what some of the initial findings were.

W. Baummy Can we get a repeat of the question because you were breaking up significantly?

T. Eichenseher Of course. It's my understanding that the Corp had started to study whether or not to upgrade the levee system so that it could handle a class five storm. I was

wondering if I could get more details on the status of that report before Katrina and what some of the initial findings were.

A. Naomi That study, the feasibility study was scheduled to start or could start in FY06.

We have done some preliminary work to determine federal interest and we are in the process of putting together what's called a project management plan to define the cost of that study and to get an agreement signed with our local sponsor, the state of Louisiana. So, we are in the very early stages of that study. So, we don't have any preliminary results as of yet. It is a question of just getting these studies started, getting them funded and agreements signed so that study can proceed.

T. Eichenseher Has the study been held up by funding?

A. Naomi No, well it's just a question of handling all the details necessary for, it's going to be a very large study and there's a lot that needs to be done to get these large studies properly initiated, like having the paperwork signed and agreements signed with our sponsors and getting the necessary information to our headquarters so that we can proceed with the study.

T. Eichenseher One more quick follow-up. How long have you been working or working towards that?

A. Naomi We were authorized by Congress to do a reconnaissance study back in 1999. We received money in 2000 and we completed that reconnaissance study in 2002, which indicated there was a federal interest in proceeding with the feasibility study. Since that time we have been working with our sponsors to formulate how we're going to do the feasibility study. This is a rather massive study. There's a lot of components to it and there's going to be a lot of complications involved. It's going to take at least five to six years to complete this study and could cost in excess of \$10 million to \$12 million.

D. Crookshank This is Dana Crookshank, USACE Headquarters. This will be our last question.

Coordinator Our next question comes from Gary Fields from *Wall Street Journal*.

G. Fields Thank you again. Last week when you actually had meeting to do an assessment of the oncoming hurricane, had it hit Florida and what category was it at at that particular time? The second part is at what point did the employees

therefore the Army Corps of Engineers in the district actually have to leave?

Finally, have you guys had a chance to talk to your employees to make sure everybody's okay?

J. Rickey

Yes, let me kind of explain the process. Certainly as this all developed, we have on our staff a member from NOAA who advises us on the varying models and tracks of the storm. We started our, what you would probably consider a battle staff rhythm in the later part of the week as the storm approached Florida. All of our districts, particularly the New Orleans district and the Vicksburg district started activating their crisis action team, preplanning, contacting their sponsors and notifying their employees and other teams to be prepared to deploy out of the area of harms way.

The New Orleans district specifically ... up here in Vicksburg on the Vicksburg district headquarters and they did so, I believe on Sunday started moving this way. We did leave a small contingency behind in New Orleans, the district engineer and about seven members. They ensconced themselves in the concrete bunker down there to be able to immediately respond to the needs of the city and the state and the local interest that were down there to get out as soon as the storm passed and start assessing the damage and provide to the

crisis action team up here, the division crisis action team and also the crisis action team at the headquarters USACE on what they were seeing on the ground, what assets need to be marshaled and what assets need to be moved that way.

Now, as far as the employees, there's still accountability going on for the New Orleans staff. The Vicksburg staff here at the district is involved in the Gulf Coast Mississippi trying to bring relief to those folks. I want you to understand here at this district, at the same time that was ongoing, tropical force winds with hurricane gusts came through Vicksburg and knocked out a lot of power, phone service, communication, so it was an arduous task to move the asset forward. I want you to clearly understand the picture of here of the New Orleans folks watching the TV newscast while we're trying to save their city at the same time seeing their neighborhoods under water. What they do is they sit down and they continue to work to try to save their city. So, I hope that answered the question for you.

G. Fields

Yes. Have you checked with everybody to make sure they're safe? Is everybody accounted for?

J. Rickey They are still making accountability checks. I don't believe everybody has been accounted for, but I want to make sure that doesn't mean we're anticipating at this time not being able to account for everybody.

G. Fields Okay, thank you.

D. Crookshank Thank you very much. This is Dana Crookshank, HQ USACE in Washington.
That concludes today. Sorry for the last start. Thank you very much.

Coordinator Thank you for attending today's teleconference. This concludes today's call.
You may disconnect your line at this time. Have a good day.